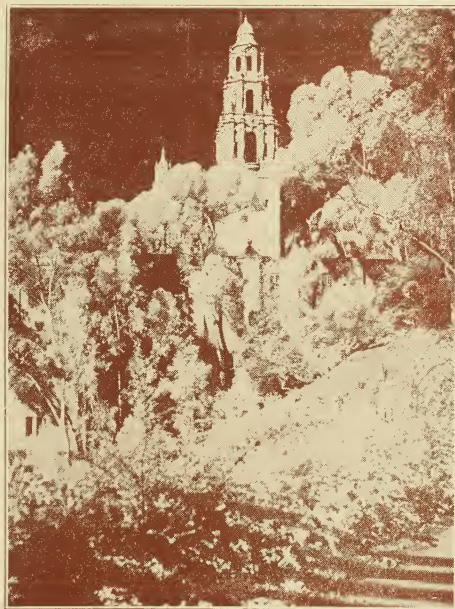


# California GARDEN

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Director of San Diego's Parks Honored  
See Page 3

**NOVEMBER  
1938**

•  
The Weed is the  
Thing

*Pieter Smoor*

•  
Silvered Leaves

*Frank Gander*

•  
Problems of the Soil

*R. R. McLean*

•  
Announcements:

Miss Sessions' Class  
Chrysanthemum Tea



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## "The Weed is the Thing"

By PIETER SMOOR

Such was the announcement for the fourth WEED show held the last days of September in the charming little bungalow and garden of the Amymay's in Pasadena.

And about ninety weed displays set around on tables, on chests, on benches, in every nook and corner proclaimed the usually hidden beauties of a multitude of weeds.

It did my heart good to see again the, by me, much beloved dove-tailed patterning in its refined miniature leaves against a background of a dark blue pottery bowl, or recognizing one of the thousand and one buckwheat cousins coily stuck behind a grey reclining figurine against a dark copper platter.

Such as these were reminders of last year when I was for the first time introduced into the secrets of the art of weed arrangement.

This year my eyes seemed to be most attracted by the sophisticated displays . . . the shadow or perhaps better called, the silhouette displays by Dick Allen, Mildred Brooks, Norman Edwards; a picture in the faintest of color set back from a white frame; sometimes a little light carefully hidden to conceal its source between frame and picture; and in the foreground a small, carefully built spray of black sedge, or of birdfoot fern, some wild grasses, taking the beholder in imagination all the way from the more recog-

nizable landscapes in snow or sun, to surrealist abstraction . . . all pieces of art of utter refinement, and strangely, all of them still making the weed the important part of the picture.

Two displays also showed that weeds certainly can come into the parlor, if the arranger knows his business. William Enking of the Pasadena schools made a very ingenious background of gold brocade paper the background for a tall show of teasels, duck, wild rye and pentstemon. And in a sudden corner the brown gold of a round container on a gold mirror made dock, parsnip and eriogonum a show of the greatest elegance.

But to complete the circle, it is with something of a feeling of relief to contemplate the simplicities of a rock, a grey pottery ram, pepper grass, all together showing that Mrs. Higman of House and Garden knows how to make a good grey composition.

When it comes to weed shows it is well to indicate one's ignorance right from the start, because while I did remember the more common kinds of buckwheat and dove-tailed, it seemed that this year Weed Society had suddenly turned "Teasel;" there was not a room without a few stuck around.

The greatest display of Teasel was a large peacocktail of teasels . . . semi-circles in higher and

higher tiers artfully held in a large circular platter; a truly gorgeous sight, achieved with the simplest of means.

And the thought came to me that anyone who is interested in the learning of flower arrangement, should first turn to do what these Pasadena's have done; look carefully at the length, the curve, the structure and pattern of a Weed, and arrange it against a background, because once mastered, it will be a guiding light into the greater intricacies of color and form composition that make a Flower display.

## SAN DIEGANO NAMED INSTITUTE FELLOW

In recognition of his years of park work, particularly those in San Diego, John Morley, park superintendent, has been named a fellow of the American Institute of Park Executives, according to information received here yesterday.

The honor, highest in the gift of the institute, was awarded at a recent convention in Milwaukee. Theodore Wirth, superintendent emeritus of the Minneapolis park system, notified local park officials yesterday.

Morley has been here since the 1915 Exposition, coming to San Diego from park duties in Los Angeles. He is a past director of the Institute of Park Executives. Since he assumed control of the local park system, Balboa park has grown from a 1400-acre tract of sagebrush into what many believe is the finest park in the world, a magnet for every tourist who visits the city and the site of two great Expositions.



# How Long Have Plants Been Blooming

## THE MUTUAL ADAPTATION OF BLOSSOMS AND INSECTS

Man is only gradually unravelling the mystery of the evolution of all life on our planet, and the road from error to truth is a hard one, with many disappointments. Often we create hypotheses of things which are taken as a matter of course in the present age of humanity. Thus there is scarcely anyone who is not convinced that as long as there have been plants in the world they must have bloomed. When this is carried further, the assertion is made that blossoms have "always" been associated with insects. At the XIIIth International Horticultural Congress in Berlin such questions as these were discussed and the answer of Science given.

Profesor Dr. F. Knoll of Vienna, stated in his paper on "Plants and Insects" that plants developed only gradually and as a comparatively late period to a point where they fashioned their leafy branches into blossoms. Science has reason to believe that these first blossoms were hardly or not at all distinct in colour from the green foliage around them. Two types of spores made possible fertilization and consequently reproduction until finally, after a gradual transition, wind pollination of flowering plants was achieved.

Nature continued to provide for a constant specialization of plant organs until it was time for certain insects to help evolution by removing pollen for food. Then the pollen was carried from blossom to blossom, a matter of tremendous importance for plant life. Colour and fragrance were the plant's means of luring the insects. Thus there arose a mutual relationship between animal and flower, and a mutual adaptation began which brought it about that the share of wind pollination receded in favor of insect pollination. The horticulturist as well as the farmer has high regard for animal pollination, and only the plant breeder occasionally has to prevent this type of fertilization for the sake of particular effects which he wishes to achieve.

But apart from this, the bee enjoys a position of special favor as a pollinator, thanks to mutual adaptation, especially in the gardens and fields of Central Europe. But flies, butterflies and beetles are likewise very important for plant life due to the same mutual relationship. The same is true of birds and of all flying creatures; we need only think of the century plant in its indigenous Mexico. How important mutual adaptation is, we are taught convincingly by the history of the introduction of red clover into New Zealand. The cultivation would have been a total failure if the people had not also taken care to import bumble-bees, whose long proboscis is suited to bring about pollination of red clover. How these "adapted" insects find their way to the blossoms is easier to understand. The reaction of the insects to color and scent has been studied by careful observation and methodical investigation of the sense physiology of the insects, while rejecting all analogy to man in the lives of both plants and insects. When these scientific results are more widely known to our horticulturists and farmers—which ought to be a fairly simple task of vocational training—a considerable impetus will have been given to productive efficiency.

## THE PHYSICAL CONDITION OF SOIL

German or Holland peat moss is frequently not properly used because it is not understood.

Soil is the medium in which plants grow, just as air is the medium in which animals live, or water is the medium in which fish live. If air or water is pure, animals or fish thrive in their natural medium provided they have food and, in the case of the animals, drink. And, similarly, if soil is in good physical condition and free from harmful substances, as acids or alkalis, plants thrive in this natural medium, provided they have proper food and moisture. It is evident then that

such a physical condition of soil as will make that soil favorable to the growth of plants is a matter entirely separate from the question of plant food.

The best physical condition of soil is invariably the result of the incorporation of sufficient vegetable matter with broken down rock, which may be in any form from fine gravel to clay. No particular kind of vegetable matter is absolutely essential. Nature builds soil through the use of any kind of plant life which will grow in a particular location. This plant life grows and dies during centuries of time and eventually forms an excellent soil medium. A farmer with a considerable acreage, sows cover crops of various kinds and plows them under and, after a period of some years, produces a proper physical condition of the soil. The great advantage of German or Holland peat moss is that, when a sufficient amount is thoroughly mixed with ordinary dirt, it will produce a soil condition almost overnight such as Nature produces during centuries or a farmer produces over a period of several years.

Soil in proper physical condition is loose and workable, holds sufficient moisture yet permits thorough drainage, absorbs moisture readily, permits the free passage of air, permits plant roots to pass freely through it. The stickiest clay or the hardest adobe or sand may be transformed into the finest loam by the proper use of German or Holland peat moss. But remember—use enough and mix it thoroughly with the soil from the top down. Use plant food too if the soil is not fertile but don't confuse the need of vegetable matter with the need of fertilizer.

German or Holland peat moss is absolutely pure vegetable matter, containing no substance detrimental to plant life and no foreign matter. It will stand up longer in the soil and will hold more moisture than any other known form of vegetable matter. Buy it from your local dealer.

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# Silvered Leaves . . . . .

By FRANK GANDER

Natural History Museum

Intense desert sunlight—white and merciless, a blue bowl of sky, sand dunes heaped in the middle distance with a hazy blue line of mountains showing beyond them, mile after mile of nearly naked land, sandy, sun-baked, and often encrusted with saline minerals—that is the desert. Few plants can live in these extremely arid stretches, but here and there are straggly bunches of Galleta Grass (*Hilaria rigida*), stunted bushes of Burro Weed (*Franseria dumosa*), and an occasional plant of Desert Holly (*Atriplex hymenelytra*). Yes, in the hottest and driest parts of the desert we find this symbol of Christmas, this reminder of sleigh rides and reindeer, of snow and bitter cold.

What a far cry it is from the almost sacred *Ilex* with its glossy, bright green leaves and scarlet berries to this sun-bleached wildling of the desert. Belonging to separate plant families that are but distantly related, these two plants have little in common, just the toothed margins of their leaves, and the value for decorative purposes at Christmas time which man has placed upon both. One seeing the Desert Holly in the middle of summer, its leaves dull and parchment-like from dessication, might feel that it is but a poor rival of the brilliantly colored true Holly. But let rain come to the desert, and our little faded shrub becomes a plant of wondrous beauty.

With the first rain that wets the sandy earth to only a few inches, new leaves appear with almost magical suddenness, and the old ones wither and fall. The whole plant glows with sparkling life. Each baby leaf at first is almost white, turns slowly to mauve with a petiole of delicate shell pink, then matures to blue gray silvered all over with tiny spangles. The flower buds appear in rounded, berry-like, burnt-sienna colored clusters, and our plant becomes entitled to its name of Holly. The richly hued bud clusters among the beautiful leaves,

silvery as moonlight, make it a holly of almost ethereal loveliness.

How sad for us humans that such beauty must "blush unseen, and waste—on the desert air." How wonderful it would be if we could have it in our own gardens. And we can if we are but willing to go to a little extra effort. It seems strange that a plant from some of the hottest parts of our desert can become adapted to our coastal climate, but it is true, nevertheless. Desert Holly has been grown successfully in San Diego and in National City, and now is available in gallon cans at some nurseries.

Not everyone will be equally successful in raising Desert Holly, for even on the desert not every plant reaches the perfection of coloring which I have attempted to describe. But even the palest and grayest of plants is well worthy of the time and effort needed to keep it growing. The first requirement is good drainage. If you have only adobe soil, better plan to grow your Desert Holly in a tub or urn. Or you could get about a yard of decomposed granite, mix half as much loamy topsoil with it, build this into a pile, block it up with rocks, and put your plant on the top of it. The same loose type of soil should be used if the plant is to be kept in a container.

With proper drainage arranged, there is not much more to worry about. Watering can be overdone, however, even in well drained soils. On the desert, plants have short growing periods and long rest periods. We must take this into account if we would make Desert Holly thrive. If watered throughout the summer, the plants will grow rapidly and will come into bloom in early autumn. The rather inconspicuous flowers will then mature in mid-winter, and if heavy rains come at that time, the plants will probably die. Better to let the plants have a complete rest during August and September with no water given them from the end of

July until the first rains come in October. Then by the time the flowers mature, the most of our rainy season will be over, water can be withheld, and the plants will be saved. After a short rest, cut the branches back to remove all of the inflorescence, and water sparingly during the summer to prevent the plants from becoming too dried out in appearance.

Even when flower buds appear quite early in the season, the plants can probably be saved if they are cut back quite drastically when the bud clusters are in the berry-like stage. The bushes will make much new growth before again attempting to bloom which event will thus be delayed until later in the season. As the male and female flowers are produced on separate plants, the rounded fruits, appearing almost like silvery berries, can not be obtained without two or three plants in close proximity.

Desert Holly will send out long roots and steal water from surrounding areas so for neighbors it should have other plants of arid regions. Use no strong fertilizers and but little of any kind. Digging in a little loamy leaf-mold around the plant once a year should be quite sufficient.

If you plan to use the branches of Desert Holly for Christmas decorations, why not plant a Toyon or Christmas Berry (*Photinia arbutifolia*), too, as its brilliant berries combine well with the silvered leaves of the desert plant. Or, these same berries may be used with sprigs of Holly-leaved Cherry (*Prunus ilicifolia*) to make wreaths that closely resemble those made from true *Ilex*. Both of these shrubs are native San Diegans and can be obtained at most nurseries.

## CHRYSANTHEMUMS

The Floral Association will hold a chrysanthemum show at the Floral Building, Balboa Park, on Saturday, November 5, from 2 to 6 p.m. and on Sunday the 6th from 10 a.m. to 6 p.m. Tea will be served in the afternoons. Plants, bulbs, and seeds will be on sale.

## Large Attendance Greets Charles Gibbs Adams . . . . .

"The Fascination of Old Mexico" was the subject chosen when Charles Gibbs Adams, noted California Landscape Architect and Town Planner addressed the San Diego Floral Association at the October meeting. The attendance of members and friends of the Association surpassed any previous meeting. "A genius with a merry wit" as quoted by the Association after he had been a guest speaker at a meeting three years previously.

Mr. Adams portrayed to his audience by word pictures and colored slides the romantic and colorful land to the south of the Rio Grande, blending history, physiography, climate, vegetation, people, religion etc. Mexico cradles every age, to dateless neolithic years—is the Mother of California, he said.

On the barren plateau and arid coast regions is found ragged yucca trees, many species of agave, mesquite, sage bushes, coarse grasses, but the cactus is the characteristic plant of Mexico, there being about 1000 species. Except the arid regions Mexico is beautifully watered.

The semi-tropical country is luxuriant in mountains, foliage, birds and sunshine. The mountain slopes are covered with a wealth of vegetation—forested up to 13,000 feet. The greatest variety of known plant life of any country in the world is found in Mexico, as also is the magnificence of the flora.

The people, descendants of the Aztecs, are a civilization totally different from ours, as is their mode of living. Mr. Adams said they are "sweet people," kind and gracious. A mother will say to her child, "That is not beautiful," instead of "Don't do that." Describing the dwellings he spoke of the hacienda as a private estate and casa is a house. The gardens of Mexico are very superior to those of Spain, and the dress is of the colorful native costumes. The sewing

machine is a conspicuous piece of house furnishing.

The eagles may be seen in great numbers, as are parrots, and the buzzards in graveyards, one on every tombstone.

There are many churches in Mexico. Cholula, a former sacred city of the Aztec and pre-Aztec period, about ten miles from Puebla, is known as the city of countless churches—a church for every day in the year and some left over for special holidays. Some of these temples too big to destroy, were covered over. The biggest of all, when covered, became the hill known as the "Pyramid." A church is built on top. A large and impressive Aztec temple is underneath. Other cities of importance are Chihuahua, Torren, Guadalajara and Mexico City. The latter was picked by the Aztec gods as a perfect site, was so indicated by an omen: an eagle swallowing a serpent, perched on a cactus, rooted in a split rock.

Mrs. Greer, president, called attention to the "Mum Tea" to be staged in the Association's building, Balboa park. Fine plants will be for sale, as will be seeds and bulbs. Brief talks on plant specimens were given by Miss Sessions, Mr. Jerebek, Mrs. Bakkers, and Mr. Gander of the Natural History Museum.

—G.M.G.

### FOREST SERVICE ANSWERS CHARGES OVER TALLEST TREES

The United States Forest Service has answered a challenge to "correct misstatements" concerning the height of the world's tallest tree. A 115-page public document entitled, *Famous Trees*, stands as the reply to private organizations which questioned whether the Forest Service had ever inspected the tall trees of the world.

The *Famous Trees* pamphlet, page 72, paragraph 2, reads, "A

redwood (*Sequoia sempervirens*) in the Humboldt State Redwood Park, near Dyerville, Humboldt County, is said to be 'the tallest tree now known.' It is 364 feet high. This redwood has been dedicated to the Founders of Save-the-Redwoods League, and is therefore called the Founders Tree." The publication also mentions another redwood tree on Bull Creek Flat which is 345 feet high.

Implications that the Forest Service had not made "necessary inspection" of the redwoods arose over incorrect information released to the press from Washington, D.C. The news dispatch was quoted as saying that "the world's tallest tree now standing is reported to be an Australian eucalyptus which is 325 feet tall."

The *Famous Trees* publication says, "Reports have been made of Australian trees 400 and 500 feet tall, but the tallest eucalyptus now standing is a giant gum (*Eucalyptus regmans*) in Victoria, which is 325 feet tall."

"As evidenced in the booklet, *Famous Trees*, the tallest tree now known is a California redwood," Regional Forester S. B. Shaw answered critics. "The Forest Service has gone to great effort to record for the public the best known trees associated with notable persons, events and places as well as trees noted for size, age or freak characteristics.

"I regret that California's famous Founders Tree has been subjected to these controversial comments. For several years forest officers in California have been making surveys and studies of the redwoods with the view of establishing in the redwood region a national forest under national Forest Service management and protection. We are ready to back up our contention with anyone that the Founders Tree is the world's tallest known tree."

The *Famous Trees* publication which occasioned the newspaper comments on the redwoods, has been made available to the public on request to the Superintendent of Documents, Washington, D. C., at the cost price of 15 cents.

## GET THAT NEW LAWN IN NOW!

By The Master Gardener

If you're faced with the task of making a new lawn in the near future, don't debate with yourself about whether to make it now or wait until next spring. By all means, choose fall.

Here are some of the reasons why fall-made lawns are best:

The soil is warm and workable, a condition which is often not found later.

Fall rains provide plentiful moisture.

The cool weather is ideal for the growth of grass. It tends to develop a strong root growth and induces stooling.

Few weed seeds germinate in the fall, and the grass does not have to compete with weeds as in spring sowing.

There is more time to devote to the job now than during the rush of spring work, and the work can be done more thoroughly.

While the exact date best for seeding cannot be given since it varies with the locality, from late October to mid-December is a satisfactory period for fall seeding in most sections.

Be sure when preparing the seed bed to apply a complete balanced plant food to the area, so as to insure plenty of available nourishment to the young grass plants.

## WINTER LAWNS

As soon as Bermuda Grass gets the least touch of frost, it is a brown, ugly spotted carpet. To maintain a green lawn throughout the winter, blue grass, clover, and Italian ryegrass may be sown any time during the next few weeks.

The troublesome, expensive methods employed in making winter lawns a few years ago, such as digging up the permanent lawn, have been supplanted by a new economical method which does not interfere with the permanent lawn.

Before sowing the winter lawn seed, rake and cut the Bermuda Grass closely, removing the clippings.

Then apply from two to four pounds of a complete balanced food

## MISS SESSIONS TO TEACH CLASS IN GARDENING

A rare opportunity is afforded local garden lovers to study under a foremost garden authority. Miss Kate Sessions will teach gardening under the auspices of the University of California extension division. The class will meet every Wednesday 10-12 a.m. in the Florence school building room 5, First and University. There will be eight meetings and the first will be visitor's day. The charge will be \$6.00 for the course and \$1.00 registration fee if you are not registered for other courses. **FIRST MEETING NOV. 2nd.**

The course will be completed in time for spring planting and Miss Sessions will cover improvement of soil condition, when to sow for bloom at a specified time, planning the flower garden for continuous bloom and for proper color arrangement, perennial gardens, plant identification, and plant material best suited to various types of architecture. Further information may be secured at 409 Scripps Bldg.

It might be interesting to note at this time that Mr. Wm. Templeton Johnson's class in planning the home will be repeated in the spring. Mr. Johnson, whose beautiful examples of architecture are to be seen in various parts of San Diego, has made this a popular course and one which is valuable to the average person planning a home. Information will be given before the spring meetings.

per 100 square feet of lawn surface. If possible, wet down thoroughly.

Two days after applying the plant food, broadcast the winter lawn seed evenly over the lawn area, using 10 lbs. to each 1,000 square feet. Mulch with peat or leaf mold. Rake and roll and soak down thoroughly. Keep moist until growth starts; the grass should germinate in 10 to 14 days, the clover in two, and should be cut when it attains a height of 3 or 4 inches.

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## OUR NATIVE PINES

Sugar pine *Pinus lambertiana* is found from Oregon to Lower California, at elevations from 3000 feet in the northern part of the State to 8000 and 10,000 feet in Lower California. It is the largest and most magnificent of Pacific white pines, and the most valuable per board feet of all commercial pine timber on the Pacific slope. Its massive trunk attains a height of 160 to 180 feet with a diameter of 4 to 7 feet. It lives from 300 to 500 years.

In San Diego County sugar pine is very rare, being found in a few instances on the east slope of Cuyamaca Peak, Hot Springs Mountain and on the Volcan Mountains, in isolated stands or intermingled with other conifers.

No commercial cutting is done at present on these areas. The present timber is considered more valuable for watershed protection and recreational purposes.

The steady southerly migration of the blister rust disease offers a very serious threat to the few remaining stands of this magnificent tree in San Diego County.

The disease attacks the five-needle white pines, such as the sugar pines, western white, and eastern white pines.

There are only two five-needle pines in San Diego County, sugar pine and Torrey pine, *Pinus torreyana*. The Torrey pine is found on only one isolated area in San Diego County near Del Mar and on Santa Rosa Island South of Santa Barbara. Whether this species is susceptible to the blister rust disease remains to be seen, but if it should be, this historic and very interesting species of pine could very easily become extinct.

Other coniferous types found in San Diego County are Coulter, Jeffrey ponderosa pine, bigcone spruce, incense cedar and Tecate cypress. For some reason, blister rust does not attack these species, leaving them free to battle the Ips and Dendroctonus pine bark beetles and to withstand the scourge of fire.



# Problems of the Soil . . . .

By R. R. McLEAN County Horticultural Commissioner

**Question.** Will you please tell me something about papayas? Can one get fruit from one plant or must there be several? Will cold weather injure or kill them? Are any papayas grown in this county? How about sapodillas, will they grow here?—Mrs. L. D.

**Answer.** Papayas are, with possible rare exceptions, either male or female and it is generally quite necessary to have both forms if fruiting is to be assured. These should, of course, be placed reasonably near together. It is said that from a given quantity of seed probably two-thirds of the resulting plants will be pistillate or female and one-third staminate or male. Occasionally fruits are matured on male trees, these fruits hanging on long pendant stems. Those matured from female trees are borne along the trunk in the axils of the leaves, on short stems.

Papayas are quite sensitive to cold weather and must be protected from frost. If planted in frosty locations without adequate protection they will be a flat failure. Very fine specimens of this fruit have been raised out-of-doors in the warmer and frost-free sections of the county, but the most successful planting is under cloth and glass, that of the Paxton Conservatories at Encinitas. Many thousands of pounds are produced here and shipped to many markets. Presumably this is the only commercial planting of any size in California. The results of the Paxton plantings prove that given protection from frost, a warm soil and intelligent care, papayas can be well grown in San Diego County.

Sapodillas are more tender even than papayas and can be raised in this county only under the most favorable conditions, apparently. Specimen trees are growing here and there have been produced some fruit, but it seems doubtful if sapodilla growing will ever meet with very much success here. At the same time they should be given a very thorough trial as it is entirely

possible that certain types may be developed that will be suitable for our climatic conditions.

**Question.** Can you tell me how to get rid of nut grass? I had some sandy soil brought in from the Tijuana Valley a year or so ago and now I have lots of this grass. I have tried digging it out but without much success. Can it be killed with chemicals?—J. B.

**Answer.** Nut grass can, theoretically at least, be killed by the proper use of carbon bisulphide or certain chlorates. Constant cultivation at the right time may also be employed with a fair degree of success. In practice, however, nut grass is exceedingly difficult to handle. The underground "nuts" retain their vitality for a long period and because of this the grass is not easily killed out either by drying or cultivation. The object of cultivation, of course, is to exhaust the stored-up food in the nuts without giving them an opportunity to replenish their supply through the leaves. Carbon bisulphide is expensive to use and is only partially effective. Because of its toxic effect to plant roots it can not be used safely where the latter invade the area in which nut grass is growing. Chlorates, such as Atlacide, are also partially successful if used on the grass tops at the time the latter are fully mature and in flower. Some owners of infested land where the area concerned is not large have even gone to the trouble of digging up the soil and sifting it in order to attempt to remove the nuts. Obviously this is impractical except in a very limited way. Hogs turned in on nut grass will root up the nuts but in most cases this is also not practicable. The best remedy that can be presented, under most conditions, is the constant cutting of the plants under ground before they reach the light. This is a long process and must be carried out faithfully or it will be a failure.

# Passion Fruit

**Question.** I would very much like to know if the growing of passion fruit has arrived at a commercial stage as yet. Where can I see plantings of this fruit? Do you advise one to engage in it? I am told the fruit has no pests, is this true?—D. L.

**Answer.** At the last fruit census taken by the agricultural commissioner's office this past summer there were 55 acres of passion fruit in this county in bearing and 5 acres non-bearing, that is, that had not reached bearing age. The bulk of these plantings are in the Vista district. There is now some commercial production in Vista and along the coast from Encinitas north, but the writer has no late information as to its extent. The passion fruit is a very fine addition to our list of better fruits and Americans are just beginning to realize this. Its possibilities in the manufacture of soft drinks, sherbets, ice creams, etc. have hardly been explored by most people. It will probably take considerable time and money to create a sufficient demand for it to warrant the planting of very large acreages at this time or to guarantee a profit from more than a limited acreage. If you are interested in the fruit it is advised that you go to Vista or Encinitas and talk with those who are actually growing it. Find out about their production costs, yields, markets, returns etc. before putting any great amount of money into the business. This advice applies just as readily to any proposed investment in any fruit growing venture. No recommendation of any description can be made here, other than as above given.

With reference to pests it can be said that passion fruit is subject to nematode attack on the roots and to mealy bugs on the vines. Neither of these pests is an absolute bar to growing passion fruit, but may be a serious handicap if proper precautions are not taken. Perhaps other insects may occasionally be met with on this fruit but the two pests mentioned are the most injurious here.

## "Off" Season Color

**Question:** In planting a new place I would like, if possible, to plant shrubs and perennials which would furnish cut flowers or berries throughout the year. What can you suggest? Our location is high and quite windy but warm enough that we can grow mangos, cherimoyas, etc. What shade trees, excluding acacias, would meet the above requirements?—L.G.S.

**Answer:** You have rather a wide possible choice inasmuch as many of our most valuable flowering plants are at their best in what is generally regarded as the "off" season. A few suggestions appear below. Of course there are many other flowering plants in addition to those named.

### Spring Flowering

Ceanothus—large shrubs  
 Fremontia mexicana—small tree

Dendromecon rigidum

Bulbs—various sorts

Roses

Spirea

Flowering fruit trees

Violets

Mimulus

Matilija poppy

Buddleias

Genistas

Escallonias

### Summer Flowering

Abelias

Oster, perennial

Aster fruticosus

Brooms, Scotch

Campanulas

Buddleias

Crepe Myrtle—a small tree

Escallonias

Gerberas

Hibiscus—large shrubs

Phlox

Heliotrope

Genista

Statice

Moraea

Gardenias

Penstemons

Roses

### Winter Flowering

Escallonias

Heathers

Bulbs—Narcissus,

Watsonia, Gladiolus

Abelias  
 Fuchsias  
 Bouvardia  
 Chorizema  
 Violets  
 Carnations  
 Linum flavum-flax  
 Arctotis

### Berried Shrubs

Toyon or California Holly  
 Crataegus-hawthorns  
 Pyracanthus-fire thorns  
 Duranti plumieri  
 Nandina  
 Pittosporum rhombifolium  
 Cotoneaster

**Question:** I have a three-year-old orange tree planted in nothing but leaf mold, in a hole 3½ feet in diameter by two feet deep. It doesn't seem to be growing very fast although it appears hardy. Will you tell me what nourishment I should add to the soil around the tree? What sprays are used on orange trees?—F.C.F.

**Answer:** You do not state if the soil in which this tree is growing is well drained or not. A hole two feet deep is not sufficient unless there is good drainage underneath. In shallow soil, poorly drained, a young citrus tree will do fairly well for a time but as it grows older and the roots reach down, trouble will develop unless drainage can be provided. If the drainage condition is satisfactory, probably what the tree needs is food. Apply a liberal quantity of barnyard fertilizer, or that from chicken runs, this fall and early in the spring, say about the first of March, apply a pound of sulphate of ammonia, irrigating it in. In a month or so add another pound and a third pound about 6 weeks after the second lot. It might also be a good plan to work some good soil into the leaf mold around the tree. Under normal conditions a light leaf mold hardly has "body" enough to hold the tree roots firmly.

It is of no value to spray unless there is something attacking the tree. Scale insects and red spiders are usually controlled by the use of oil sprays which can be obtained from any dealer in garden materials. Aphis require a spray or dust of tobacco, when present.

Aphis are not likely to be of any injury until early spring when the new leaves appear. Scale insects and spiders should be controlled now, if present.

**Question:** I have three acres of sandy loam east of Lakeside. I considered potatoes as a winter crop but find on inquiry that February frosts might ruin the crop. I would like to put in a crop that might prove profitable. What are your suggestions?—H.H.M.

**Answer:** Outside of potatoes there is nothing the writer can suggest this late in the season. If your locality is subject to heavy frosts in the winter, winter potatoes could not safely be grown. However, you might plant very early in the spring and get off an early summer crop, as is done in the frosty sections of El Cajon. This past year growers of early summer potatoes made good money. This also applies to early plantings of sweet potatoes and yams. In the late summer and fall and might try tomatoes, peppers, egg plant, etc., and in the fall and winter, spinach and asparagus. Spinach can be cut throughout the winter and spring and asparagus from February and March on. Of course it would take from two to three years to get asparagus well established. If you are in the river bottom your soil should be quite warm and should develop the crops named rapidly. As individual locations, even a few miles apart, vary considerably as to soil, winter frosts, etc., it is suggested that you contact your immediate neighbors and find out what has done the best there. This should give you some key to a possible cash winter crop. Before planting any vegetable crop you should know, if you are in the river bottom, if your soil is infested with nematodes. These soils are as a rule infested with these root pests and if present will have to be reckoned with and taken into consideration when deciding upon what crop to plant.

It is also advised that you contact the Farm Advisor, Mr. E. E. Eastman, Chamber of Commerce, San Diego, and ask him for an opinion as to the best crops to plant in your location.

## Does Your Wisteria Vine Refuse to Bloom?

Here are some suggestions that may help to overcome the difficulty

By THE MASTER GARDENER

Each year I receive inquiries from owners of fine specimens of wisteria vines which refuse to bloom. Sometimes the trouble can be remedied—sometimes not. But here are some suggestions that have produced bloom in stubborn cases. And if you have about reached the point of grubbing out your vine, it will do no harm to make one last try before taking the drastic step.

Often, lack of bloom is due to the fact that the vine is a seedling, and not a grafted plant. Some seedlings will never bloom, regardless of what is done, others may bloom eventually, but only after being established a great many years. Of late years, most nurserymen will sell nothing but grafted plants; these having been propagated from blooming wood, and are sure to flower, though it may take three or four years before blooms are produced, for even grafted plants are slow to become established.

Sometimes, in the case of a vine that has refused to bloom for years, a severe root pruning will induce it to flower. Prune the roots by cutting with a sharp spade all the way around the plant, at a distance two or three feet from the trunk; the spade must be deep, so as to cut the roots down to quite a depth. This root pruning results in the production of less foliage and tends to divert the energy of the plant toward the production of flowers.

Some authorities also advocate the pruning of side branches on the top growth.

Feed the vine, applying a complete balanced plant food, at the rate of one rounded tablespoon to the square foot of space, surrounding the trunk, and water well. Applications of a complete plant food should be made at intervals of six weeks, beginning early in spring. In any instance where it is difficult to get a plant to flower, it is especially essential that a complete balanced plant food be used. An incomplete, unbalanced material

may promote the leaf growth to the detriment of blossom development.

The wisteria requires full sun.

### AIMS AND METHODS OF FLORICULTURE

#### Systematic Cultivation Has Displaced Old Ideals of Beauty

In the middle of the last century Charles Darwin gave a broad basis, supported by experiments, to the doctrine, already expressed a number of times previously, that the organic world evolves from simple to more perfect forms. The strong influence of his work on the natural sciences and the general outlook on the world has extended far into the field of practical breeding. The cultivation of flowers and ornamental plants is to a large extent based on breeding. The general aims of this work were discussed by Horticultural Director A. Steffen, of Erfurt, at the XIIth International Horticultural Congress. Although deliberate breeding began in this field considerably later than with other plants, thousands of types and forms have now been treated in this way and developed into a great wealth of varieties. The initial types have meanwhile in many cases been completely abandoned and forgotten, but the demands of cultivators and the general public change constantly and become more exacting. Originally floriculture was carried on only by fanciers, but this presently lead to the setting up of certain ideals of beauty and thus to the directing of floriculture toward definite aims. Such rules of beauty lasted many decades and were still completely in force as late as 1850. After that they were gradually displaced by systematic cultivation, which was more and more devoted to the special requirements of commercial horticulture. The introduction of new varieties and their use for crossing influenced the development of flower-breeding to a very

high degree. But there are also types of plants which have greatly increased their wealth of colour and form without being crossed with new varieties. With the fragrant vetch, for example, immense results have been achieved from only a single variety to start with. New colors were obtained and the length of stalk and number of blossoms per stalk were increased. A greater number of leaves and certain changes in the forms of blossoms produced great effects from the point of view of beauty as well as value. Selection is the most essential part of breeding procedure with all plants grown by seeds or out of doors. But for further evolution crossing is indispensable if the development is to be guided along definite lines. Crossing of breeds has always been of immense importance to horticulture, especially when new types or varieties have been imported from foreign countries. The teachings of the modern science of heredity have not yet had any marked influence on horticultural breeding. The production of new forms by radiation and other means has not thus far been applied in practical floriculture, since the results have frequently been pathological. But in view of increasing diseases the practical problems are above all to achieve exuberance and health. Among the general aims of breeding are easy and sure reproduction, rapid development, growth in the desired direction, greater beauty, and above all health and resistance to disease.

### COFFEE TREES BEAR IN SAN DIEGO COUNTY

At the County Fair just closed at Del Mar bearing coffee trees were on display. A tasty cup of coffee was served from beans grown in this county, indicating that this country may not be wholly dependent upon Brazil for its coffee supply.

Other interesting features of the agricultural exhibit were 6 foot string beans, 200 pound pumpkins, a gourd 51 inches in circumference, giant watermelons and bearing trees of rare tropical fruits.



# San Diego Floral Association



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Third Tuesday of Each  
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